CLAIMS

1.   A method for obtaining configuration data for a data processing apparatus, the apparatus cooperating with a timing unit, the method comprising the steps of :

a) commencing (104) a first mode of the timing unit;

b) detecting (108) a first event, which first event occurs after the commencement of the first mode, the first event being caused by the timing unit;

c) calculating (110) a first time interval between the commencement of the first mode and the first event;

d) performing (112) a first comparison between the calculated first time interval and a first reference time interval; and

e) determining (116) configuration data in dependence on the result of the first comparison.

2.   A method as claimed in Claim 1, wherein following step d) the method further comprising the steps of :

I.   calculating (214) an error value in dependence on the result of the first comparison;

II. commencing (216) a second mode of the timing unit;

III. detecting (218) a second event, which second event occurs after the commencement of the second mode, the second event being caused by the timing unit;

IV. calculating (220) a second time interval between the commencement of the second mode and the second event;

V.   adjusting (222) the calculated second time interval in dependence on the error value;

VI. performing (224) a second comparison between the adjusted second time interval and a second reference time interval; and

VII. determining (228) configuration data in dependence on the result of the second comparison.

3.   A method as claimed in Claim 1, wherein following step a) the method further comprises the step of :

•   counting time periods.

4.   A method as claimed in Claim 2, wherein following step II the method further comprises the step of :

•   counting time periods.

5.   A method as claimed in any of Claims 2 or 4, wherein following step I the method further comprises the step of :

- determining configuration data in dependence on the result of the first comparison.

6.   A method as claimed in any of Claims 1 to 5, wherein a mode is commenced in response to a voltage applied to the data processing apparatus.

7.   A method as claimed in any of Claims 1 to 5, wherein an event is detected in response to a voltage applied to the data processing apparatus.

8.   A method as claimed in any of Claims 1 to 5, wherein a mode is commenced in response to software running on the data processing apparatus.

9.   A method as claimed in any of Claims 1 to 5, wherein a mode is commenced in normal operation of the timing unit independently of the data processing apparatus.

10.   A method as claimed in any of Claims 3 to 4, wherein a time interval is calculated using the counted time periods.

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11.   A method as claimed in any of Claims 1 to 5, wherein a time interval is calculated by using a timestamp.

12.   A data processing apparatus operable to interface to a timing unit and to perform a method according to any of the Claims 1 to 11, the data processing apparatus comprising :

- a first port (302) operable to receive an event signal;
- non-volatile storage (306) operable to store a configuration program and data related to said configuration program;
- storage (308) operable to store data of computation; and
- a CPU (304) operable to run said configuration program.

13.   A data processing apparatus according to Claim 12, wherein the first port is further operable to output a mode indication signal.

14.   A data processing apparatus according to Claim 12, further comprising:

- a second port (312) operable to output a mode indication signal.

15.   A timing unit operable to interface to the data processing apparatus of Claim 12, the timing unit comprising :

- a first port operable to output an event signal; and
- a circuit operable to generate said event signal.

16.   A timing unit operable to interface to the data processing apparatus of Claim 13, the timing unit comprising :

- a first port operable to receive a mode indication signal and to output an event signal; and
- a circuit operable to generate said event signal in response to and subsequent to the mode indication signal.

17.   A timing unit operable to interface to the data processing apparatus of Claim 14, the timing unit comprising :

- a first port operable to receive a mode indication signal;
- a second port operable to output an event signal; and
- a circuit operable to generate said event signal in response to and subsequent to the mode indication signal.

18.   A timing unit according to any of Claims 15 to 17, wherein the event signal is a voltage pulse.

19.   A timing unit according to any of Claims 15 to 17, wherein the event signal is a voltage transition.

20.   A timing unit according to any of Claims 15 to 17, wherein the event signal is a periodically varying voltage.

21.   A timing unit according to any of Claims 18 to 20, wherein the circuit comprises an RC network.

22.   A data processing apparatus according to any of Claims 12 to 14 comprising software configured for carrying out the method steps as claimed in any of Claims 1 to 11.